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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,450	02/05/2004	Hirokazu Atsumori	NITT.0184	3836
7590 04/29/2008				
Stanley P. Fisher Reed Smith LLP Suite 1400 3110 Fairview Park Drive Falls Church, VA 22042-4503			EXAMINER CARLOS, ALVIN LEABRES	
			ART UNIT 3714	PAPER NUMBER
			MAIL DATE 04/29/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/771,450

**Applicant(s)**

ATSUMORI ET AL.

**Examiner**

ALVIN L. CARLOS

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 February 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1 and 3-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 14, 2008 has been entered.
2. The following is a Final Office action in response to communications received February 14, 2008. Claims 1, 4, 6, 8 and 10 are being amended and added new claims 13-14. Claims 1, 3-14 are now pending.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1, 3-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Collura 5899867 in view of deCharms 20020103429.

Re claim 1, Collura teaches a training assistant system comprising a training task presentation unit for presenting a training task to a trainee having damage in the brain (column 5 lines 49-58), a trainee's response collection unit for collecting a response

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from the trainee in accordance with the training task (column 3 lines 61-64), a brain activity measurement unit for measuring brain activity at a plurality of brain regions of the trainee (see figure 1, column 5 lines 18-30).

However, Collura fails to teach the following limitations as taught by deCharms: means for searching a region of interest among the plurality of brain regions by comparing a response from the trainee's response collection unit with measurement results from the brain activity measurement unit (paragraphs 0031 and 0032) and an information processor for controlling presentation by said training task presentation unit and for determining a next training task to be performed depending upon the region of interest searched by said means for searching (paragraphs 0038 and 0039).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 3, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: information processor controls said training task presentation unit such that a task for searching the region of interest (paragraphs 0327 and 0328).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and

perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 4, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: information processor sets evaluation criteria for the response of training the trainee and evaluates the response of training the trainee based on the evaluation criteria (paragraphs 0056-0059).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 5, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: evaluation criteria including a response time and a correct answer rate (paragraphs 0149, 0157 and 0654).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 6, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: information processor sets evaluation criteria for the measurement results from the brain activity measurement unit and evaluates said measurement results of training the trainee based on the evaluation criteria (paragraphs 0266, 0268 and 0384).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 7, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: evaluation criteria including a change percentage in a peak value of the brain activity (paragraphs 0407 and 0483).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 8, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: information processor sets evaluation criteria for the response from the trainee's response collection unit and the measurement results from the brain activity

measurement unit and evaluates said response and second measurement results based on the evaluation criteria (paragraphs 0058-0060).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 9, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: evaluation criteria include a response time, a correct answer rate and a change percentage in a peak value of the brain activity (paragraphs 0345-0347).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 10, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: means for searching selection unit compares a first timing of the response from the trainee's response collection unit and a plurality of second timings of the measurement results from the brain activity measurement unit brain activity and selects the region of

interest by judging synchronism between the first timing and the second timings (paragraphs 0273-0274 and 0351-0352).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 11, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: synchronism between the first timing and the second timings is judged by using a correlation coefficient or a calculation method (paragraphs 0471 and 0485).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 12, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: training task is presented via at least images or sounds (paragraph 0096 lines 1-11).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods,



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software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

5. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collura 5899867 in view of deCharms 20020103429.

Re claim 13, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: the training task presentation unit presents said new training task to the trainee and a response to said new training task from the trainee's response collection unit is compared with measurement results of said new training task from the brain activity measurement unit to evaluate a result of training so as to decide another new training task to be performed (paragraphs 0044-0045 and 0057).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

Re claim 14, Collura teaches the invention as discussed above.

However, Collura fails to teach the following limitations as taught by deCharms: means for searching locates the region of interest without using information of a damage location in the brain (paragraphs 0070-0071).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Collura's invention in view of deCharms in order to provide methods, software and systems relating to the use of behaviors performed by a subject and perceptions made by a subject that alter the activity of one or more brain regions of interest as taught by deCharms (paragraph 0011 lines 1-5).

### ***Response to Arguments***

6. Applicant's arguments filed February 14, 2008 have been fully considered but they are not persuasive.
7. The Examiner reminds that it is the Applicant responsibility to read the entire disclosure of the prior art cited for rejections including the pertinent references cited. In addition, see the above citation for more clarifications.
8. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "means for searching a region of interest ROI among the plurality of brain regions by comparing a response from the trainee's response collection unit with measurement results from the brain activity measurement unit ") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from

the specification are not read into the claims. **See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).**

9. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. **See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).**

10. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. **See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).**

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as per the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALVIN L. CARLOS whose telephone number is

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(571)270-3077. The examiner can normally be reached on 7:30am-5:00pm EST Mon-Fri (alternate Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571)272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alvin L Carlos/

Examiner, Art Unit 3714

/XUAN M. THAI/

Supervisory Patent Examiner, Art Unit 3714